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| 10/815,237 | 03/31/2004 | Brian Murphy | 036617-0201 | 8131 |

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| EXAMINER | |
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| AZARIAN, SEYED H | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/815,237 | MURPHY, BRIAN | |
| | Examiner | Art Unit | |
| | Seyed Azarian | 2624 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *20 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24 and 26-55* is/are rejected.

7)☒ Claim(s) *25* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## RESPONSE TO AMENDMENT

1. Applicants' amendment filed, 8/20/2007, see page 9 through page 24 of remark, with respect to the rejection of claims 1-55 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Applicant's argues in essence regarding claims 1, 5-55 that McNitt does not disclosed or teaches, " defining a standard motion or comparing the motion under analysis to a standard motion".

Contrary to the applicant's assertion, McNitt discloses (column 15, lines 98-20, indeed, the positional elements of the swing may be compared to a table or database (database is standard motion as describe in embodiment) of values to determine whether such information relates to positional information that is desirable or not, wherein the database contains average values based on predetermined desirable swing mechanics. Examiner indicates also (column 6, lines 23-37, accordingly, each sample from the **first information signal** 208 corresponds to a sample from the **second information signal** 210. In this embodiment, time stamps are administered on each information signal 208 and 210 on preset intervals such that corresponding samples of the signals 208 and 210 are identified by the same time stamp. In another embodiment, time stamps are administered on each information signal 208 and 210 independently and the association of the samples is accomplished through a **comparative analysis** performed by the synchronization module 200. Time stamping the information signals 208 and 210 creates synchronized information that is transmitted to the processing

module 212 to provide synchronized analysis associated with the information acquired by the sensors 202 and 204 (refer to signal comparison)). Further (column 16, lines 48-63 initially, receive operation 402 receives a first information signal representing sensed information relative to a golf club swing. The first signal is of a first type of information, e.g., video, position, weight transfer, pressure or impact information, among others. Next, receive operation 404 receives a second information signal representing sensed information relative to the golf club swing, wherein the second information signal is a different type of signal as **compared** to the first signal. As an example, the first type of signal may be video information and the second type may be positional, weight transfer or impact information. In an embodiment, first receive operation 402 and second receive operation 404 simultaneously receive the first and second information signals. In another embodiment, the first information signal and the second information signal might be acquired substantially simultaneously).

In response to Applicant's argument regarding claim 2 that McNitt does not mention of comparison to a defined standard motion"".

The Examiner indicates, that (column 17, lines 46-51, accordingly, the first and second information signals might be a positional information signal, a video information signal, or an impact information signal. Additionally, the sensed information might be any form of information related to a stroke, swing, movement, or motion of a person performing physical acts (refer to defined signal), also column 16, lines 48-63 initially, receive operation 402 receives a first information signal representing sensed information relative to a golf club swing. The first signal is of a first type of information,

e.g., video, position, weight transfer, pressure or impact information, among others. Next, receive operation 404 receives a second information signal representing sensed information relative to the golf club swing, wherein the second information signal is a different type of signal as **compared** to the first signal. As an example, the first type of signal may be video information and the second type may be positional, weight transfer or impact information. In an embodiment, first receive operation 402 and second receive operation 404 simultaneously receive the first and second information signals. In another embodiment, the first information signal and the second information signal might be acquired substantially simultaneously).

In response to Applicant's argument regarding claim 3 that McNitt does not teach "the adjustment of the action in relationship to a comparison of the action to a defined standard".

The Examiner indicates, that (column 13, lines 1-49, refer to adjusting the motion under analysis and comparison).

In response to Applicant's argument regarding claim 4 that McNitt does not teach "the logging of an intended result of the motion".

The Examiner indicates, that (column 20, lines 17-25, in accordance with a specific embodiment, process operation 520 discards redundant records of positional measurement samples. A spline fit is applied to each of the positional measurement samples. Using the spline parameters based on the smooth motion being measured, the metric value at each frame time is computed. This calculated data is written into a positional measurement file which is ultimately saved as part of an archived lesson

(logging), also column 22, lines 35-44, by being marked, the recording are saved to a lesson file and later used in the web-based lesson to provide the golfer with a comparison of his before and after swings. Moreover, analysis operation 1004 allows marking of all forms of analysis information, including, instructor and student comments, measurement values, video playback, still shots associated with the video playback, audio clips, such as comments and observations from an instructor, and any other form of analysis information derived from the analysis tool (stored analysis or logging)).

## Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-24 and 26-55, are rejected under 35 U.S.C. 102(e) as being anticipated by McNitt et al (U.S. patent 6,567,536).

Regarding claim 1, McNitt discloses a method for capturing and analyzing motion comprising: defining a standard motion (see abstract, analyzing and calculating different type of information, such as athletic motion);

receiving a first signal from a first sensor, the first signal being representative of a motion under analysis (column 3, lines 8-27, first sensor generating a first information signal);

receiving a second signal from a second sensor, the second signal being representative of the motion under analysis (column 3, lines 8-27, second sensor generating a second information signal);

synchronizing the first signal to the second signal (column 3, lines 8-27, synchronizing the first signal with the second signal to provide an analysis tool for providing athletic training and instruction);

and comparing the motion under analysis represented by the synchronized first signal and second signal to the standard motion (column 16, lines 48-64, comparing the first signal and second signal).

Regarding claim 2, McNitt discloses the method of claim 1, wherein comparing the motion under analysis includes identifying when the motion under analysis falls outside of an acceptable range of motion in relation to the standard motion (column 9, lines 38-62, the data collected within the timing window is marked and stored for analysis, to see if the collected data from the video and position analysis system falls outside the timing window).

Regarding claim 3, McNitt discloses the method of claim 1, further comprising adjusting the motion under analysis based on the comparison of the synchronized first signal and second signal to the standard motion (column 13, lines 13-49, refer to adjusting the motion under analysis).

Regarding claim 4, McNitt discloses the method of claim 1, further comprising logging an intended result of the motion under analysis (column 4, lines 34-54, the video

recording equipment to record a physical motion and to transmit a recorded video information signal).

Regarding claim 5, McNitt discloses the method of claim 4, further comprising adjusting the motion under analysis based on the comparison of the synchronized first signal and second signal to the intended result of the motion under analysis (column 16, lines 48-64, comparing the first signal and second signal for result of the motion).

Regarding claim 6, McNitt discloses the method of claim 1, further comprising initiating a trigger event to begin receiving the first signal (column 9, lines 38-63, triggering event signal can be communicated to the processing module).

Regarding claim 7, McNitt discloses the method of claim 1, further comprising initiating a trigger event to terminate reception of the first signal (column 9, lines 38-63, triggering event signal can be terminates).

Regarding claim 8, McNitt discloses the method of claim 1, further comprising initiating a trigger event to begin receiving the second signal (column 9, lines 38-63, triggering event for second signal).

Regarding claim 10, McNitt discloses the method of claim 1, further comprising time-stamping the first signal (column 6, lines 15-54, time-stamping the first signal).

Regarding claim 11, McNitt discloses the method of claim 1, further comprising time-stamping the second signal (column 6, lines 15-54, time-stamping the second signal).

Regarding claim 12, McNitt discloses the method of claim 2, wherein the first signal is a video signal (column 2, line 57 through column 3, line16, video signal).

Regarding claim 13, McNitt discloses the method of claim 12, wherein the second signal represents position information (column 2, line 57 through column 3, line 16, refer to second signal represent the position).

Regarding claim 14, McNitt discloses the method of claim 13, further comprising reconstructing the motion under analysis using the position information (Fig. 1, column 4, lines 13-33, position analysis system for motion).

Regarding claim 15, McNitt discloses the method of claim 14, further comprising comparing the reconstructed motion to the standard motion (column 16, lines 48-64, comparing the first signal and second signal).

Regarding claim 16, McNitt discloses the method of claim 1, further comprising generating a composite display of the first signal and the second signal (Fig. 7, column 3, lines 65-67, displaying analysis information).

Regarding claim 17, McNitt discloses the method of claim 14, further comprising generating a composite display of the video signal and the reconstructed motion under analysis (column 4, lines 34-54, displaying information related to the synchronization of the signal).

Regarding claim 18, McNitt discloses the method of claim 17, further comprising analyzing the video signal in relation to the position information when the motion under analysis falls outside of the acceptable range of motion (column 4, lines 34-54, displaying information related to the synchronization of the signal, also column 9, lines 38-62, the data collected within the timing window is marked and stored for analysis, to

see if the collected data from the video and position analysis system falls outside the timing window).

Regarding claim 20, McNitt discloses the method of claim 1, wherein the standard motion is an ideal motion for a subject executing the motion under analysis (column 17, line 64 through column 18, line 12, subject executing).

Regarding claim 21, McNitt discloses the method of claim 1, wherein the standard motion is defined by a user (column 5, lines 31-45, defining by user).

Regarding claim 22, McNitt discloses the method of claim 12, further comprising receiving the video signal from a video camera (column 2, lines 36-66, receiving signal from video).

Regarding claim 23, McNitt discloses the method of claim 22, further comprising focusing the video camera on a subject providing the motion under analysis (see claim 1, also column 2, lines 36-66, receiving signal from video).

Regarding claim 24, McNitt discloses the method of claim 13, further comprising positioning sensors for capturing the position information on a subject providing the motion under analysis (see claim 2, also Fig. 1, column 4, lines 13-33, position analysis system for motion).

Regarding claim 26, McNitt discloses the he method of claim 1, further comprising receiving a fourth signal from a fourth sensor, the fourth signal being representative of a mechanical or electrical parameter (column 18, lines 34-48, defining the parameter);

synchronizing the fourth signal to the first signal and the second signal; and analyzing the motion under analysis represented by the synchronized first signal and second signal in relation to the fourth signal (see above claims, also column 22, line 62 through column 23, line14).

Regarding claim 27, McNitt discloses the method of claim 2, further comprising providing visual feedback when the motion under analysis falls outside the acceptable range of motion (column 9, lines 38-62, the data collected within the timing window is marked and stored for analysis, to see if the collected data from the video and position analysis system falls outside the timing window).

Regarding claim 30, McNitt discloses the method of claim 24, wherein the sensors are magnetic sensors (column 7, lines 7-14, magnetic sensor).

Regarding claim 32, McNitt discloses the method of claim 1, wherein receiving the first signal and receiving the second signal comprise receiving the first signal and the second signal over a network (column 23, lines 35-43, web-based application via the World Wide Web).

Regarding claim 33, McNitt discloses the method of claim 32, wherein the network is the Internet (column 23, lines 35-44, Internet connection).

Regarding claim 35, McNitt discloses the system of claim 34, wherein the input device receives data representing an intended result of the motion under analysis (column 13, lines 13-49, refer to adjusting the motion under analysis).

Regarding claim 37, McNitt discloses the system of claim 24, further comprising a first trigger mechanism for initiating generation of the first signal (column 9, lines 38-63, triggering event signal can be communicated to the processing module).

Regarding claim 39, McNitt discloses the system of claim 24, further comprising a time-stamper for time-stamping the first signal (column 6, lines 15-54, time-stamping the first signal).

Regarding claim 41, McNitt discloses the system of claim 24, wherein the first sensing device is a video camera (column 2, line 57 through column 3, line16, video signal).

Regarding claims 9, 19, 28 and 31, it recites similar limitation as claims 1, 7, 8 and 27 are similarly analyzed.

Regarding claim 29, 34, 36 and 38 it recites similar limitation as claim 1, 3, 8 and 21 are similarly analyzed.

Regarding claim 40 and 42-47 it recites similar limitation as claim 1, 10, 12, 13, 14 and 30 are similarly analyzed.

Regarding claim 48-55 it recites similar limitation as claims 1, 10, 14, 15, 16 and 17 are similarly analyzed.

***Allowable Subject Matter***

4. Claim 25 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## ***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (571) 272-7443. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.
Status information about the PAIR system, see http:// pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Seyed Azarian*
*Patent Examiner*
*Group Art Unit 2624*
November 11, 2007

SEYED AZARIAN
PRIMARY EXAMINER